

AMENDMENTS TO THE CLAIMS

1. (Currently amended) Switched-mode power supply with a primary side and a secondary side and with a transformer with a primary-side winding, a secondary-side winding and at least one auxiliary winding, wherein the primary-side winding and the auxiliary winding are connected to the primary side and the secondary-side winding is connected to the secondary side,

a primary-side switch, which is connected to the primary-side winding in order to interrupt a flow of current through the primary-side winding,

a freely oscillating control circuit for generating switching pulses which drive the primary-side switch,

a circuit for generating an image voltage between the terminals of the auxiliary winding, in order to generate an image voltage, which on the primary side replicates a voltage to be controlled on the secondary side,

wherein the switched-mode power supply further comprises a timing unit, which is coupled to the primary-side switch such that the duration of a turn-off period of the primary-side switch is variable within a switching cycle, ~~and~~

wherein the timing unit comprises a control capacitor, and ~~that~~ wherein the turn-off time of the primary-side switch can be adjusted by the charging current of said control capacitor, and

wherein the timing unit comprises a diode, which is arranged between the primary-side switch and an input terminal of the switched-mode power supply such that the charging current of the control capacitor can be limited during the turn-off time of the primary-side switch.

2. (Cancel)

3. (Cancel)

4. (Original) Switched-mode power supply according to claim 1, wherein the charging current of the control capacitor can be controlled by a charge-current control circuit, which is arranged between the input terminal of the switched-mode power supply and a control terminal of the primary-side switch.

5. (Original) Switched-mode power supply according to claim 4, wherein the charge-current control circuit comprises two amplifiers, which are connected in series.
6. (Original) Switched-mode power supply according to claim 1, wherein an oscillation suppression circuit is connected to the auxiliary winding such that unwanted oscillations in the control circuit of the primary-side switch are suppressed.
7. (Original) Switched-mode power supply according to claim 1, wherein a phase-shift circuit is provided for the phase-shifted turn-off of the primary-side switch.
8. (Previously presented) Switched-mode power supply according to claim 1, wherein the timing unit is adapted to deactivate a control signal during a turn-on period of the primary-side switch.
9. (Original) Switched-mode power supply according to claim 1, comprising two primary-side auxiliary windings.
10. (Original) Switched-mode power supply according to claim 9, wherein one of the auxiliary windings is connected to the primary-side switch via a resistor, a diode and a transistor.
11. (Original) Switched-mode power supply according to claim 10, wherein one of the auxiliary windings is connected via a second diode to a capacitor such that it can be charged to the voltage to be controlled on the secondary side and that, in dependence of the voltage present at the capacitor, a current flows through the diode, resistor, a third diode and the base-emitter junction of the transistor, which delays the turn-on of the primary-side switch due to the turn-on duration of the transistor.
12. (Previously presented) Switched-mode power supply according to claim 9, wherein the control circuit comprises an overvoltage protection circuit.

13. (Previously presented) Switched-mode power supply according to claim 5, wherein the charge-current control circuit further comprises a first Zener diode, which is connected via a resistor to the base of a control transistor such that the turn-on duration of the control transistor delays the turn-on of the primary-side switch.

14. (Original) Switched-mode power supply according to claim 13, wherein the charge-current control circuit furthermore comprises a second Zener diode, which is connected in parallel to the series circuit of the base-emitter junction of the primary-side switch and a resistor connected to the emitter of the primary-side switch.

15. (Original) Switched-mode power supply according to claim 1, further comprising a temperature compensation circuit for compensating the temperature of the switching threshold of the primary-side switch.

16. (Previously presented) Switched-mode power supply according to claim 1, further comprising an optocoupler for feeding back a secondary-side voltage to the primary circuit.

17. (Original) Switched-mode power supply according to claim 16, wherein the optocoupler is connected such that with the optocoupler in a blocking state a minimum power can be transferred and in the conducting state a maximum power can be transferred.

18. (Cancel)

19. (Cancel)